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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,759	12/08/2003	Philip H. Mellor	130209.491	3454

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EXAMINER	
PRESTON, ERIK D	

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/730,759	MELLOR ET AL.	
	Examiner	Art Unit	
	Erik D. Preston	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-6,8,9,11,14-17,26 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-6,8,9,11,14-17,26 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 15 is objected to because of the following informalities: in the 6th line of the claim, the phrase "...of the magnet slot slots shaped..." should be changed to "...of the magnet ~~slot~~ slots shaped..." Appropriate correction is required.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-6,8,9,11,14-17,26 & 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kliman (US 5159220).

With respect to claim 8, Kliman teaches a stator (Col. 8, Lines 28-30); and a rotor core (Fig. 1, #10) mounted for rotation with respect to the stator, the rotor core comprising a number of magnetic slots (Fig. 1, #15A-D), and at least one-non-magnetic structure formed at a rotor core internal location proximate to an expected pole location of a magnet emplaced in the magnet slot (Fig. 1, #20); a filler forming at least a part of the at least one non-magnetic structure wherein the filler comprises epoxy (Col. 5, Lines 32-40).

With respect to claim 2, Kliman teaches the electric machine of claim 8, wherein each of the magnet slots comprises a portion having a shape in complimentary to a shape of at least a portion of the magnet.

With respect to claim 3, Kliman teaches the electric machine of claim 2, wherein the portion of the magnetic slot having a complimentary shape is elongated (as seen in Fig. 1).

With respect to claim 4, Kliman teaches the electric machine of claim 8, wherein the at least one non-magnetic structure formed at a rotor core internal slot location proximate to an expected pole location of a magnet (Fig. 4, #14A-D) emplaced in the magnet slot comprises an end of the magnet slot abutting at least one non-magnetic region having a width in excess of a width of the magnet slot where at least a portion of the magnetic slot is substantially magnet shaped (as seen in Fig. 4).

With respect to claim 5, Kliman teaches the electric machine of claim 4, wherein the at least one non-magnetic region having a width in excess of a width of the magnet slot comprises a substantially bulbous region (as seen in Fig. 4).

With respect to claim 6, Kliman teaches the electric machine of claim 5, wherein each of the magnet slots further comprises: At least one notch (Fig. 2, #38) extending inwardly into the magnet slot and disposed between a substantially linear portion of the magnet slot and the substantially bulbous region (as seen in Fig. 2).

With respect to claim 9, Kliman teaches the electric machine of claim 8, further comprising: A number of permanent magnets, each of the permanent magnets disposed within a respective one of the magnet slots.

With respect to claim 11, Kliman teaches the electric machine of claim 9, further comprising: A number of non-magnetic wedges (as seen in Fig. 1, #20 & Fig. 4), each non-magnetic wedge disposed adjacent to a respective one of the permanent magnets

to establish a movement resistant friction-fit between the permanent magnet and the magnet slot .

With respect to claim 15, Kliman teaches an electric machine comprising: A stator (Col. 8, Lines 28-30); and a rotor (Fig. 1, #10) mounted for rotation with respect to the stator, the rotor core comprising a number of magnetic slots (Fig. 1, #15A-D) each slot comprising opposed end portions and a central portion disposed between the end portions, the central portion of each of the magnet slots shaped to complimentarily receive a magnet; a number of magnets complimentarily received in the central portions of the magnet slots of the rotor; and a load absorbing material filling at least a portion of each of the end portions of the magnet slots.

With respect to claim 14, Kliman teaches the electric machine of claim 15, wherein the load absorbing material comprises epoxy filler.

With respect to claim 16, Kliman teaches the electric machine of claim 15, wherein the end portions of the magnet slots have a width greater than a width of the central portion of the magnet slots (as seen in Fig. 4).

With respect to claim 17, Kliman teaches the electric machine of claim 15, wherein the end portions of the magnetic slots are substantially bulbous-shaped.

With respect to claim 26, Kliman teaches a rotor assembly of an electric machine, comprising: A lamination layer configured to be axially stacked in a series of lamination layers to form a rotor core of an electric machine comprising: A lamination layer (Col. 4, Lines 22-30) configured to be axially stacked in a series of lamination layers to form a rotor core of an electric machine; the lamination layer forming at least a

part of at least a part of at least one internal slot, each internal slot comprising an elongate portion and at least one expanded bulbous end portion disposed at one end of the elongate portion; a permanent magnet disposed within each internal slot; and a load absorbing material received in the end portions of the internal slots between a portion of a wall forming the end of portion and the respective permanent magnet disposed in the internal slot.

With respect to claim 27, Kliman teaches the rotor assembly of claim 26, wherein the load absorbing material is epoxy.

Response to Arguments

Applicant's arguments with respect to claims 2-6,8,9,11,14-17,26 & 27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4918831, US 5679995 & US 6967420

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/20/2005

DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
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